

REMARKS

Independent Claims 1, 5, 6, 24 and 27 are amended. The first paragraph of each claim is amended to indicate that the structure accommodates passage of viscous fluids. This is supported on page 3, line 13 to page 5, line 15 of the specification.

The third paragraph of Claims 1, 5, 6 and 24, and the fourth paragraph of page 27 are amended to recite openings through the second layer. This is supported in Fig. 1, where openings 45 pass through the second layer 30. This is also supported on page 28, lines 1-3, which refers to holes in the second layer (e.g. a scrim material, which can be formed from a film).

The final paragraph of each independent claim is amended to delete superfluous language, and to recite “shrinking the second layer relative to the first layer, thereby forming a plurality of fiber loop pores in the first layer and shrinking the openings through the second layer to form a plurality of pores smaller than the fiber loop pores.” This is supported on page 20, lines 6-11; page 22, lines 10-21; and page 28, lines 1-6.

Dependent Claims 3, 25 and 26 are canceled, and Claim 4 is amended. Claims 30-41, directed to a nonelected invention, have been canceled.

a) Claim Rejections Based on 35 U.S.C. §102(b)

The Examiner rejected Claims 1-4 and 24-29 under 35 U.S.C. §102(b) as anticipated by U.S. Patent 5,814,178 to Jacobs. This rejection is respectfully traversed.

Jacobs discloses a process for producing a liquid-resistant laminate (Abstract). This is contrary to Applicants' claims, all of which are directed to a method for producing a composite for accommodating passage of viscous fluids. For example, a liquid-resistant laminate may be useful as an outer cover (backsheet) in a personal care absorbent article, but is not useful as a bodyside liner (topsheet) which transmits liquid from the wearer to the interior of the article.

Applicants' independent claims require openings through the second layer. In order to accommodate passage of viscous fluids, these openings must be sufficiently large so that the second layer does not act as a liquid barrier. The openings, which resemble apertures or holes, shrink due to shrinkage of the second layer. Even after shrinkage, the openings remain large enough to pass viscous liquid, and carry it away from

a wearer. Referring to Applicants' Fig. 1, for instance, the second layer 30 faces the wearer's skin. The openings 45 through the second layer transmit liquid away from the wearer's skin, so that the wearer remains comfortable and relatively dry.

For at least these reasons, Jacobs does not anticipate any of Claims 1-4 or 24-29. To the contrary, Jacobs teaches away from a method for producing a structure which accommodates the passage of viscous fluids (see Col. 7, lines 50-62).

The Examiner rejected Claims 1, 3-4 and 24-29 under 35 U.S.C. §102(b) as anticipated by GB 2,284,786 to Zelazoski et al. This rejection is respectfully traversed.

Applicants' independent claims require shrinking the second layer relative to the first layer, thereby forming fiber loop pores in the first layer and shrinking the openings through the second layer to form pores smaller than the fiber loop pores. Referring to Applicants' Fig. 1, for instance, the openings 45 in the second layer 30 define pores smaller than the fiber loop pores in the first layer 20. Thus, liquid which initially passes through the second layer 30 from the wearer, will tend to pass through the first layer 20 toward the absorbent core 38, and will not pass upward through the layer 20 toward the wearer. The pore size relationship between the first and second layers helps keep the wearer dry and comfortable.

Zelazoski et al. discloses a quilted laminate of a film layer and a fibrous nonwoven layer, wherein the film layer includes a plurality of elongated slits 18 (Fig. 2). According to Zelazoski et al.:

The slits 18 are distinguishable from apertures in that when making the slits 18 in the film 12, little or no material is removed when cutting through the film layer. As a result, a slit film, unlike an apertured film, provides limited visibility through the slits when the film is flat (page 7, lines 31-37).

In other words, the disclosed slits have substantially no open area, or pore area, prior to retraction of the film. When the film is bonded to the nonwoven web and caused to shrink, the slits open up to form openings or apertures through the film. Thus, the open area, or pore area, increases instead of decreasing when the film is retracted.

Applicants' claims require shrinking of the openings through the second layer to form pores smaller than the fiber loop pores (in the first layer). Due to the unique geometry of the slits disclosed in Zelazoski et al., openings are created (i.e. caused to increase in size) when the film layer shrinks. In a representative example, the slits are more than 4 mm long (page 22, lines 1-7). When the film is retracted, the slits open up to form visibly large apertures (Fig. 4). In summary, Zelazoski et al. does not disclose or suggest shrinking openings in the second (e.g. film) layer to form pores which are smaller than fiber loop pores in the first (nonwoven web) layer.

b) Claim Rejections Based On 35 U.S.C. §103(a)

The Examiner rejected Claims 5-10 and 27-29 under 35 U.S.C. §103(a) as obvious over Jacobs in view of U.S. Patent 6,217,889 to Lorenzi et al. This rejection is respectfully traversed.

As explained above, Jacobs does not disclose or suggest a method of producing a composite material for the passage of viscous fluids. Instead, Jacobs teaches away from such a structure (Col. 7, lines 50-62).

Lorenzi et al. is directed to a disposable washcloth or wipe, and is not related to Applicants' invention. The disposable article includes a creped nonwoven layer and a cleansing component adjacent to the nonwoven layer (Abstract). Lorenzi et al. is not combinable with Jacobs because the references are from different fields of art, and there is no suggestion to combine them. Furthermore, even the combined references would not motivate persons skilled in the art to make Applicants' invention because Jacobs requires inter alia a liquid-impermeable film layer.

The Examiner rejected Claim 2 under 35 U.S.C. §103(a) as obvious over Zelazoski et al. in view of Jacobs. This rejection is respectfully traversed. As explained above, neither reference discloses or suggests the limitations of Claim 1, from which Claim 2 depends. Furthermore, the references are not combinable because Jacobs teaches away from a method for producing a structure which accommodates the passage of viscous fluids (Col. 7, lines 50-62). The slits in the film of Zelazoski et al., which open up to form large apertures, would defeat the liquid barrier function of the Jacobs laminate (See Fig. 4 of Zelazoski et al.).

The Examiner rejected Claims 5-10 and 27-29 under 35 U.S.C. §103(a) as obvious over Zelazoski et al. in view of Lorenzi et al. This rejection is respectfully traversed.


As explained above, Zelazoski et al. does not disclose or suggest shrinking openings in a second (e.g. film) layer to form pores which are smaller than fiber loop pores in a first (nonwoven web) layer. Contrary to Applicants' claims, the shrinking of the film in Zelazoski et al. actually creates pores from slits, and/or causes enlargement of pores. Lorenzi et al. does not fill the gaps in the Zelazoski et al. disclosure. Furthermore, the references are from non-analogous fields of art, and there is no suggestion to combine them.

The Examiner rejected Claims 8-10 and 28 under 35 U.S.C. §103(a) as shown over Zelazoski et al. and Lorenzi et al. in view of Jacobs. This rejection is respectfully traversed. As explained above, the combination of Zelazoski et al. and Lorenzi et al. does not disclose or suggest the limitations of independent Claims 6 and 27. Furthermore, the two primary references are from non-analogues fields of art, and there is no suggestion to combine them. Jacobs is also non-analogous to Lorenzi et al. Furthermore, Jacobs cannot be combined with Zelazoski et al. because Jacobs requires inter alia a liquid-impermeable film layer (Col. 7, lines 50-62). The barrier structure of Jacobs would not function as an open structure disclosed in Zelazoski et al., or vice versa.

Conclusion

Applicants believe that the claims, as now presented, are in condition for allowance. Applicants respectfully request withdrawal of the claim rejections under 35 U.S.C. §102(b) and 35 U.S.C. §103(a).

Respectfully submitted,



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